Current Water Conditions in Massachusetts June 11, 2015

- May precipitation was below normal
- May streamflows were below normal
- May groundwater levels were normal and below normal
- May reservoir levels were generally normal



Precipitation Conditions

Estimated May state-wide average precipitation was 1.05 inches, which is 28 percent of the long-term average (3.80 inches) for the month. Precipitation in the regions of Massachusetts ranged from 14 percent (Connecticut River) to 49 percent (Northeast) of the long term average. A table of May 2015 estimated precipitation statistics, based on preliminary precipitation data from the Department of Conservation and Recreation and National Weather Service monitoring networks, is attached. A map at the back of this report shows the areal distribution of May rainfall. Precipitation deficits of 4 to 7 inches have accumulated over the months of March through May.

Precipitation values for March, April, and May are now within Massachusetts Drought Management Plan thresholds. The 3-month values reflecting March, April, and May are in the Watch level for all regions except for Cape Cod and the Islands. Other factors in state drought determination have not reached their thresholds, however.

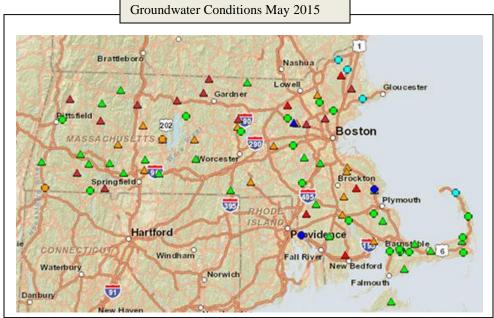
An extended period of low precipitation resulted in state-wide dry conditions in May that were favorable for brush and forest fires. Early June precipitation of one to 3 inches is expected to have alleviated these fire danger conditions, except in the Southeast and Cape Cod/Islands regions, where significant storms have not occurred and less than one inch of precipitation has been recorded for the month to date.

Groundwater Levels

Groundwater levels reported by the U.S. Geological Survey at the end of May or beginning of June varied from below to above normal. An assessment of groundwater conditions in the Massachusetts drought regions at the end of this report lists below normal monthly ground water conditions in the Connecticut River, Central and Southeast regions. The USGS Groundwater Conditions for the end of May 2015 can be viewed at the web site:

http://ma.water.usgs.gov/water_statement/2015_05/index.html

Ground water conditions remain in the normal level for the Massachusetts Drought Management Plan.



<10

10-24

25-75

76-90 Above Normal •

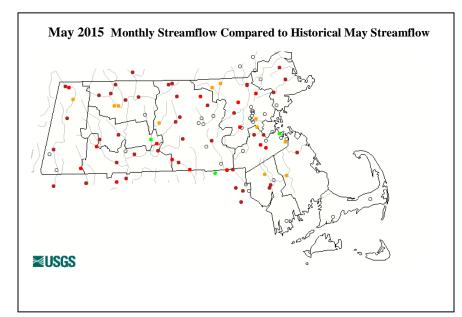
Streamflow

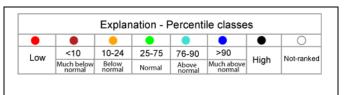
Average May 2015 streamflows that are monitored by the Commonwealth of Massachusetts and United States Geological Survey (USGS) cooperative stream gaging program were mostly below normal in all areas of the state. See map at right found at: http://waterwatch.usgs.gov/new/index.php?m=mv01d&r=ma&w=map

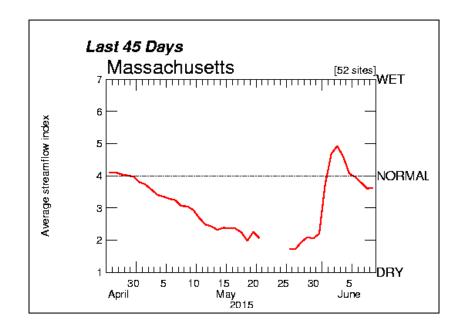
Streamflow has reached Advisory level for this indicator in the Massachusetts Drought Management Plan in the west, Connecticut River, and central regions of Massachusetts.

The graph below depicts a composite daily streamflow relative to normal streamflow for Massachusetts for the period of April 26, to June 8, 2015. Stream flows were in the dry range during most of May but rose into the normal range during late May and early June as a result of a major precipitation event in late May and early June. The graph is a composite of 52 real-time gages across the state with a long period of record. An updated streamflow plot can be found at:

http://waterwatch.usgs.gov/index.php?map_type1=pa07d&map_type2=&map_type3=&map_type4=&web_type=pa07d%2Cplot&state=ma&huc=us&xinfo=&map_type=real&group_idx=1®ion_cd=ma&group_idx_changed=1&sel_nm=map_type1&sel_va=real







KEY: 1 = New record low for day $2 = < 10^{\text{th}} \text{ percentile } 3 = 10^{\text{th}} - 24^{\text{th}} \text{ percentile } 4 = 25^{\text{th}} - 74^{\text{th}} \text{ percentile } 5 = 75^{\text{th}} - 89^{\text{th}} \text{ percentile } 6 = \ge 90^{\text{th}} \text{ percentile } 7 = \text{New record high for day}$

Water Supply Reservoir Levels

Selected surface water reservoir percent-full values for water supply sources provided by water suppliers are listed below. The reservoir percent-full values listed are for the end of May or the beginning of June 2015. A few small and medium reservoirs have fallen below normal levels for this time of year.

May/June 2015 Massachusetts Reservoir Status

	Percent		Percent
Reservoir/City or Town	Full	Reservoir/City or Town	Full
Quabbin	95.7	Beverly/Salem	97.3
Worcester	97.0	Lynn	75.9
Cobble Mt./ Springfield	89.3	Taunton/New Bedford/Assawompsett	N.A.

Note: NA Indicates data not available for this report

Drought Indices/Forecasts

US Drought Monitor

The National Drought Mitigation Center's (NDMC's) June 9, 2015 Drought Monitor Map shown at right indicates moderate drought in much of Massachusetts, with an area of Abnormally Dry conditions.

The May 21, 2015 NOAA Seasonal Drought Outlook indicates drought conditions are expected to persist or intensify in Massachusetts and southern New England through August 31, 2015.

Standardized Precipitation Index (SPI)

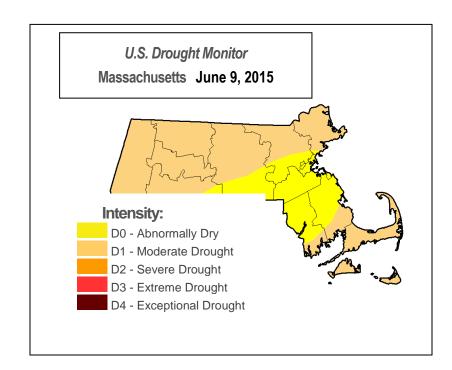
Standardized Precipitation Index values for the West, Connecticut River, and Central regions at the end of May were in the Massachusetts Drought Management Plan Advisory range.

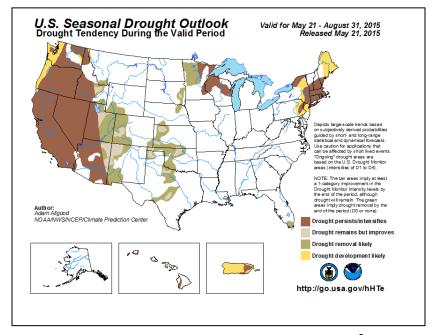
NWS/NOAA's Climate Prediction Center

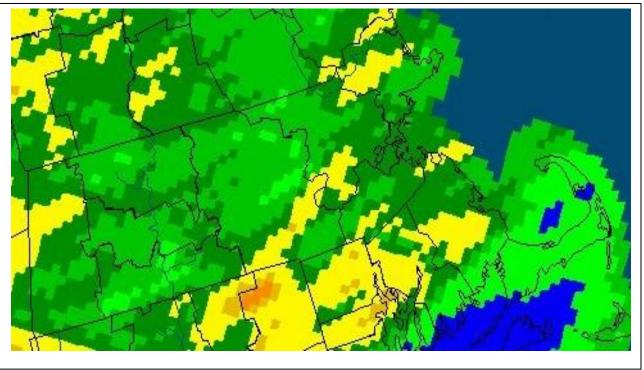
The Climate Prediction Center forecasts above normal temperatures and precipitation for the northeast US for the month of June 2015. The three month outlook for June, July, and August 2015 does not indicate unusual conditions.

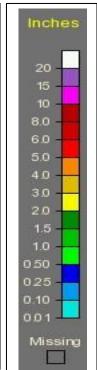
Extended Forecasts

Precipitation is in the forecast for Massachusetts in the next week. The Climate Prediction Center's extended forecasts for the next 6 to 14 days indicate above normal precipitation and above normal temperatures. The NWS Climate Prediction Center Information can be found at: http://www.cpc.noaa.gov/index.php









http://water.weather.gov/precip/

TOTAL RAINFALL MAY 2015



GENERAL WATER CONDITIONS IN MASSACHUSETTS - MAY 2015 EOEEA and MEMA DROUGHT MANAGEMENT PLAN REGIONS

Massachusetts Regions	Surface-Water Conditions	Groundwater Conditions
Cape and Islands	ND	Normal
Southeast	Below Normal	Below
Northeast	Below Normal	Normal
Central	Below Normal	Below
Connecticut River	Below Normal	Below
Western	Below Normal	Normal

Note: Surface- and groundwater conditions for individual streamflow-gaging stations and wells may differ from general conditions. ND, no data

This report was prepared by the Massachusetts Department of Conservation and Recreation. Data were obtained from the sources described in the report and may be preliminary in nature. Additional information, previous and future water conditions reports can be found on our web site:

 $\underline{http://www.mass.gov/eea/agencies/dcr/water-res-protection/water-data-tracking/precipitation-composite-current-conditions.html}\\$